

AMENDMENT TO THE CLAIMS

Please **CANCEL** claim 3, 10-12, 14, 16, and 17; **AMEND** claims 1, 2, 4-9, 13, 15 and 18; and **ADD** new claims 19-25, as follows. A copy of all pending claims and a status of each may be found below.

1. (Currently Amended) An automatic liquid handling system comprising:
 - a first dispensing tip container ~~having a plurality of holding portions for holding dispensing tips;~~
 - a second dispensing tip container, each of the first and second dispensing tip containers having a plurality of holding portions for holding dispensing tips, each of the holding portions being arranged in a matrix form defined by rows and columns;
 - a dispensing head having attachment portions to which the dispensing tips ~~are at least one dispensing tip is attached~~, wherein when ~~one or more~~ the dispensing tips are attached to the attachment portions, the dispensing head is capable of performing sucking and expelling operations for sucking liquid in or expelling the liquid out from the ~~one or more~~ dispensing tips;
 - a moving means for moving mechanism that moves the dispensing head;
 - a first reagent container ~~that holds reagent;~~
 - a second reagent container, each of the first and second reagent containers having a plurality of container portions arranged side-by-side, wherein the plurality of container portions of the first reagent container extend in a direction of rows and the plurality of container portions of the second reagent

container extend in a direction of columns;

a microplate formed with a plurality of wells for holding specimen, the wells being arranged in a matrix form defined by rows and columns;

a control device that controls the sucking and expelling operations performed by the dispensing head and also controls the moving means mechanism to control movements of the dispensing head, wherein the control device having input means for inputting one or more processes includes an input portion for inputting a process to be executed, the process including at least one of information regarding reagent to be used, information of a dispense volume per well of the microplate, information of the number of wells in which the reagent is to be dispensed and information regarding dispensing direction, a first determining unit that determines an arrangement of dispensing tips to be set at the holding portions of the first and second dispensing tip containers based on the input information, and second determining unit that determines an arrangement of reagent to be stored at the container portions of the first and second reagent containers based on the input information; and

a display that indicates the arrangement of the dispensing tips to be set at the holding portions and the arrangement of the reagent to be stored at the reagent container portions by the dispensing head; and

dispensing tip arrangement calculating means for calculating an arrangement of the dispensing tips in the dispensing tip container based on information contained in the one or more processes input into the control device.

2. (Currently Amended) The automatic liquid handling system according to claim 1, wherein the control device further includes a simulating portion that simulates an operation time to execute the inputted process and determines whether the process can be completed within a predetermined period of time ~~the plurality of wells formed in the microplate is arranged in a matrix form defined by rows and columns, and wherein the information comprises information regarding a dispensing direction on the matrix form to dispense the reagent into the wells of the microplate, and information regarding a range of the wells on each of the rows or each of the columns into which the reagent is dispensed.~~

3. (Cancelled)

4. (Currently Amended) The automatic liquid handling system according to claim 3 19, wherein the display indicates the arrangement of the dispensing tips using different colors for each of the processes.

5. (Currently Amended) The automatic liquid handling system according to claim 3 19, ~~further comprising~~ wherein the control device includes a storage section that stores information regarding the arrangement of the dispensing tips determined by the determining section ~~storage means for storing the arrangement of the dispensing tips calculated by the dispensing tip arrangement calculating means.~~

6. (Currently Amended) The automatic liquid handling system according to claim 4 19, wherein the ~~plurality of wells formed in the microplate is arranged in a matrix form defined by rows and columns, and the moving means~~ the moving mechanism moves the dispensing head in a three dimensional space defined by X-axis, Y-axis, and Z-axis, the moving mechanism ~~means~~ further swiveling the dispensing head in a plane defined by the X-axis and the Y-axis wherein the X-axis is oriented in a direction of the rows ~~in which the rows extend~~ and the Y-axis is oriented in a direction of ~~in which~~ the columns ~~extend~~.

7. (Currently Amended) The automatic liquid handling system according to claim 6 19, further comprising a second ~~another~~ reagent container storing a reagent, each of the first and second reagent containers having a plurality of ~~elongated~~ container portions arranged ~~in side-by-side to extend in a first~~ direction, plural kinds of reagents being held stored separately in the plurality of ~~elongated~~ container portions.

8. (Currently Amended) The automatic liquid handling system according to claim 6 7, wherein the plurality of container portions of the first reagent container extends in a direction of the rows and the plurality of container portions of the second reagent container extends in a direction of columns ~~the reagent container has a plurality of elongated container portions arranged in side-by-side to extend in a second direction perpendicular to the first direction, plural kinds of reagents~~

being held separately in the plurality of elongated container portions of the reagent container.

9. (Currently Amended) The automatic liquid handling system according to claim 6 19, further comprising a second ~~another~~ dispensing tip container having a plurality of holding portions for holding dispensing tips, the holding portions of the second dispensing tip container being arranged in a matrix form defined by rows and columns.

10. (Cancelled)

11. (Cancelled)

12. (Cancelled)

13. (Currently Amended) The automatic liquid handling system according to claim 42 22, wherein the display indicates the arrangement of the reagent using different colors for each of the processes.

14. (Cancelled)

15. (Currently Amended) The automatic liquid handling system according to claim 40 22, wherein ~~the plurality of wells formed in the microplate is arranged in a matrix form defined by rows and columns, and the moving means~~

mechanism moves the dispensing head in a three dimensional space defined by X-axis, Y-axis, and Z-axis, the moving means mechanism further swiveling the dispensing head in a plane defined by the X-axis and the Y-axis wherein the X-axis is oriented in a direction of the rows and ~~in which the rows extend and~~ the Y-axis is oriented in a direction ~~in which the columns extend~~ of the columns.

16. (Cancelled)

17. (Cancelled)

18. (Currently Amended) The automatic liquid handling system according to claim 45 22, further comprising ~~another~~ a second dispensing tip container having a plurality of holding portions for holding dispensing tips, the holding portions of the second dispensing tip container being arranged in a matrix form defined by rows and columns.

19. (New) An automatic liquid handling system comprising:

a first dispensing tip container having a plurality of holding portions for holding dispensing tips, the holding portions being arranged in a matrix form defined by rows and columns;

a dispensing head having attachment portions to which at least one dispensing tip is attached, wherein when one or more dispensing tips are attachable to the attachment portions, the dispensing head is configured to

perform sucking and expelling operations for sucking liquid in or expelling the liquid out from the one or more dispensing tips;

a moving mechanism that moves the dispensing head;

a first reagent container storing a reagent;

a microplate formed with a plurality of wells for holding specimen, the wells being arranged in a matrix form defined by rows and columns;

a control device that controls the sucking and expelling operations performed by the dispensing head and also controls the moving mechanism to control movements of the dispensing head, wherein the control device includes an input portion for inputting one or more processes to be executed by the dispensing head, the process including information regarding a dispensing direction on the matrix form to dispense the reagent into the wells of the microplate, and information regarding a range of the wells on each of the rows or each of the columns into which the reagent is dispensed, and a determining section that determines an arrangement of dispensing tips to be set at the holding portions of the first dispensing container based on the inputted information; and

a display for indicating the arrangement of the dispensing tips determined by the determining section.

20. (New). The automated liquid handling system according to claim 19, wherein the control device further includes a calculating section that calculates a volume of the reagent to be dispensed into the wells of the microplate based on

the inputted information.

21. (New) The automatic liquid handling system according to claim 7, wherein the control device further includes a second determining section that determines an arrangement of the reagent to be stored at the container portions of the first and the second reagent containers based on the inputted information.

22. (New) An automatic liquid handling system comprising:

a first dispensing tip container having a plurality of holding portions for holding dispensing tips, the holding portions being arranged in a matrix form defined by rows and columns;

a dispensing head having attachment portions to which at least one dispensing tip is attachable, wherein when one or more dispensing tips are attached to the attachment portions, the dispensing head is capable of performing sucking and expelling operations for sucking liquid in or expelling the liquid out from the one or more dispensing tips;

a moving mechanism that moves the dispensing head;

a first reagent container;

a second reagent container, each of the first and second reagent containers having a plurality of container portions arranged side-by-side wherein the plurality of container portions of the first reagent container extends in a direction of rows and the plurality of container portions of the second reagent container extends in a direction of columns;

a microplate formed with a plurality of wells for holding specimen, the walls being arranged in a matrix form defined by rows and columns;

a control device that controls the sucking and expelling operations performed by the dispensing head and also controls the moving mechanism to control movements of the dispensing head, wherein the control device includes an input portion for inputting one or more processes to be executed by the dispensing head, the process including information regarding a dispensing direction on the matrix form to dispense the reagent into the wells of the microplate, and information regarding a range of the wells on each of the rows or each of the columns into which the reagent is dispensed, a determining section that determines an arrangement of the reagent to be stored at the container portions of the first and the second reagent containers based on the input information; and

a display for indicating the arrangement of the reagent to be stored at the container portions.

23. (New) The automatic liquid handling system according to claim 22, wherein the control device further includes a calculating section that calculates a volume of the reagent to be dispensed into the wells of the microplate based on the inputted information.

24. (New) The automatic liquid handling system according to claim 22, wherein the control device includes a storage section that stores information

regarding the arrangement of the reagent to be stored in the reagent container.

25. (New) A method for operating an automatic liquid handling system including a dispensing tip container having a plurality of holding portions for holding dispensing tips, a dispensing head having attachment portions to which at least one dispensing tip is attached, a moving mechanism that moves the dispensing head, a reagent container that holds reagent, a microplate formed with a plurality of wells for holding specimen, and a control device that controls sucking and expelling operations performed by the dispensing head and also controls the moving mechanism to control movements of the dispensing head, the control device having an input portion for inputting one or more processes to be executed by the dispensing head, wherein the method comprises:

- a first step of inputting information into the control device by using the input portion, the information including process to be executed, reagent to be used, dispense quantity, a range of dispensing wells in the microplate and a predetermined period of time set to execute the process;

- a second step of determining arrangement of dispensing tips to be set in the dispensing tip containers based on the input information regarding the dispensing wells in the microplate;

- a third step of determining arrangement of reagent to be stored in the reagent containers based on the input information regarding the reagent to be used and dispense quantity; and

- a fourth step of simulating the operation time to execute the inputted

process and determining whether the process can be completed within the predetermined period of time so as to inform an operator of a result of the determining.